

REMARKS

Claims 1-3 were pending and remain so. Claims 4-12 have been added to further define the invention. Reconsideration of this application is respectfully requested in light of the foregoing amendments and the following remarks.

I. The Lupien et al. Patent Does Not Anticipate the Claims of the Present Invention

Claim 1 stands rejected as anticipated under 35 U.S.C. §102(b). In support of the rejection, Lupien et al. (U.S. Patent No. 5,101,353) was cited. This rejection is respectfully traversed.

Lupien et al. fails to address trading of odd lots, single shares or fractional shares. Therefore, aggregation of such trades is also not disclosed. Such trades are at the core of the claimed invention, in that the claimed invention provides a mechanism for the first time for smaller investors to place trades in a manner that makes economic sense and provides for significant diversification. Lupien et al. discloses an electronic trading system, but it was precisely the inherent limitations of such systems that led the Applicant to develop the hugely successfully Foliofn trading system, which is claimed in the independent claims of the present application. For example, systems such as the Lupien et al. system do not permit trading orders that include fractional shares, single shares or odd lots, which would be considered economically unviable. For example, Lupien et al. only permits orders in lots of 100 shares. See col. 7, lines 47-59, which discusses orders in lots of 100.

Moreover, no one would place orders in such systems as Lupien et al. even at round lots where the cost of the trade was significant economically to the total value of the trading order. For example, no one would place a buy order where the cost of the trade was over 20% of the total value of the trade, as it would be unlikely that such an order would ever make a profit. The claimed invention overcomes these limitations by providing for the first time a way for these trades to be executed economically. Additionally, Lupien et al. fails to disclose anything regarding the execution or trading of odd lots, single shares or fractional shares because such trades would have been rejected by the Lupien et al. system because such trades were not possible if not in round lots of 100 shares.

The undersigned has searched Lupien et al., and in particular the citations to Lupien et al. provided by the Examiner, but cannot find and mention of factional shares, odd lots or single

shares. The citations provided by the Examiner are reproduced below, however, none disclose aggregation of single shares, odd lots or fractional shares.

5,101,353

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tional investors. The invention achieves these effects by using a portion of the portfolio's holdings to offer liquidity to the market. The system contains portfolio balancing controls which seek to ensure that the risk and return characteristics of each underlying portfolio are retained throughout the liquidity generating process. The system monitors security trades, price and size quotations and various portfolio characteristics as well as other factors in real time as disclosed herein. In response to this monitoring process the system enters, alters or cancels buy and sell orders and/or sets thereof through its own network, other networks and/or with computerized brokers and/or computerized stock exchanges.

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Col. 3, lines 3-7

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rather than limiting them to transactions with other clients. The function of these automated brokers and exchanges within the system is explained more fully below.

Within a specified period of a transaction, all executed transactions internal to the system are reported as output through the registered broker/dealer operating the system to a trade data terminal 26 and then to the central reporting facility. Similarly, but only at the end of each trading day, all trades involving each individual security are aggregated, average-priced where appropriate and electronically reported through settlement data terminal 27 for trade settlement to the clearing agent.

Clients and brokers using the system have the ability to view information pertaining to all pending orders and all of their own executed and cancelled orders ranked by various criteria as demonstrated in the various screen or window formats shown in FIGS. 2 through 6. A sorting function allows the user to concentrate on the most important orders according to the selected criteria. This display function allows users to manage their orders and to review how their decision and trade processes are working, how their orders are interacting with the market, and what other market participants are doing.

General market information, supplied by a securities information vendor at the client's site, is contained in the top box of all screens illustrated in FIGS. 2 through 6. Date, time and the day's market volume is displayed on the left hand side, the level and change in one of the broad market indices is placed on the right-hand side along with the tick figure. Tick is the net number of trades that occurred last on a price rise or decline. The middle portion of the top box on all screens displays the client's name, the type of screen being used and the type and kind of sort for the displayed data. All screen segments may be differentiated by color.

The bottom portion of all screens contains prompts
that enable the user to change the way the data is dis- 40
played or ranked, to move to other screens, to alter
orders or to respond to the orders of other system or
market participants. To accept instructions, the system
makes use of function keys available on most keyboards
and on the position of the cursor to highlight the desired 45
function or sorting attribute.

FIG. 2 illustrates a screen displaying all pending
orders for an individual user. Clients can view their
orders ranked by size (as displayed), nearness to execu- 50
tion, price move for the day, symbol, etc. The screen is
divided so that Sales appear on one half of the screen;
Purchases on the other. For each order, the security's
symbol, best bid, market or exchange displaying that
best bid (an '*' means the best bid resides on the system 55
represented by the current invention), similar informa-
tion for the ask price, the multiple of 100 shares repre-
sented by the best bid and ask, the size of this client's
order in multiples of 100 shares and the current limit
price associated with this order.

The one order listed on the Purchase side of the 60
screen in FIG. 2 indicates that this client has an order to
buy 5,000 shares of the security represented by the
symbol XYZ at a limit price of \$16.125 (all prices are
displayed as whole dollars plus the numerators of the
appropriate fraction). The best bid for the stock is 65
\$16.125 for 5,000 shares. That bid resides on the system
represented by this invention, and is obviously this or-
der. The best offer happens to be on the Midwest Stock

Col. 7, lines 1-69

Exchange, it is for 10,000 shares at a price of \$16.375. The client had a substitute order for the security BBT which currently resides on the Cancelled order list. A substitute order is an order for another security, the purchase or sale of which would substantially equally satisfy the objectives of the portfolio. At the bottom of this section, the system totals the number of pending live Purchase orders, the number of shares and the dollar value represented by these orders and what percentage of these orders could be done and at what cost, as measured from the client's limit price, should the client not insist on the displayed limit price, but accept the best terms offered by the other side. In this case, if the client were to go to the Midwest Exchange and pay \$16.375, he could, subject to prior sale, purchase his 5,000 shares from the 10,000 offered. The cost represents a 1.3% premium compared to the limit bid of \$16.125 which the client is currently advertising.

FIG. 3 illustrates the same information as FIG. 2 but for all trades cancelled on a particular day by the particular client or his trading process.

FIG. 4 illustrates essentially similar data but, in this case, relates to orders executed on a specified day. The buy side of the screen shows that this client has purchased 10,000 shares of the security ZYX at a price of \$25.25. The current bid is \$25.375 for 5,000 shares, the ask price is \$25.625 for 100 shares and the cost, as measured from the execution price of \$25.25 to the current ask (what a purchaser would have to pay currently) is a negative cost (i.e., a profit) of 1.3%. Again there is summary information at the bottom of this segment of the screen.

FIG. 5 illustrates similar data for all orders on the system. In this case, the securities are ranked by move
35 from the previous night's closing prices. A security symbol, bid, market, ask, market, size of the bid and ask, the size of the order residing on the system and the change for the day in percent terms are all displayed. Between the size of the order on the system and the
40 percent change for the day is the measurement in eighths from the best ask for sales, bid for purchases, and the limit price for the order on the system represented by this invention. For instance, the system has an order to purchase 15,000 shares of FEA which is up 4%
45 from the previous night's close. The best bid is \$21 on the New York Stock Exchange, according to the client's securities information vendor. The system order has a price of \$20.875 attached to it, so the screen displays a ' - ' in the space between the order size and
50 percent move to inform the user that the system order is the best available price less one eighth.

FIG. 6 illustrates information displayed on a screen relevant to a single order. The top left hand side of the working section of the screen gives the high, low, open
55 and last trade prices for this security, along with its change for the day (up an eighth, previous close to last sale) and volume. Shown below are the best and next best bid and ask residing on the system, and the best bids and offers represented by the other markets and ex-
60 changes as reported by the client's securities information vendor. Below this section is a segment of the screen which contains information on past trades. The top portion of this screen segment contains shares, price and time for the last 6 market trades in this security
65 obtained from the client's securities information vendor, and below that are listed the client's trades in this security, giving action, size, price, time or date and client account involved in the trade. To the extent that the

Col. 8, lines 1-69.

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Since clients have differing risk profiles at different times, the present invention provides added flexibility by permitting the client or manager to make manual changes or changes by electronic means in step 36 to his original criteria covering risk profile and the tolerated variance from the base portfolio by sector, industry, cash and other factors. Such changes may be entered at any time during or after the trading day.

Using all of the resulting data, in step 38 each security 10 is analyzed with respect to the customized criteria established for each individual client based on the following factors:

- (1) Variability;
- (2) Current holdings of that security in the particular portfolio against the portfolio's base position in that and related securities;
- (3) quoted bids and offers;
- (4) the cash position of the portfolio;
- (5) the exposure of the portfolio to various industries 20 and sectors; and
- (6) purchase and/or sale orders displayed by others in automated brokerage or exchanges to which the present invention is linked.

The resultant analysis will be used in step 40 to generate buy and sell orders and/or sets of orders at specific 25 prices for transmission by the system both internally to other clients and externally to outside broker dealers, exchanges and/or others for each security in the client's portfolio as to which the present invention deems it appropriate. The price of purchases and sales is dependent upon interrelationships between the various factors.

Col. 10, lines 1-30.

That portion of the invention that receives, handles and executes orders for the purchase and sale of securities and reports transactions to the central reporting facility, if appropriate, and to the clearing agent is operated by a registered broker/dealer. That portion of the invention which analyzes price and determines orders is operated by a registered investment adviser. Orders are executed by the system on a price/time priority basis 40 within the system in step 44, although orders could also be executed on a price/size/time priority basis. All orders generated are forwarded to controller CPU 10 which presents them together with those from other clients for display to each client or client process in a 50 manner described below. If a purchase order matches a sale order (in whole or in part) created for another client portfolio the controller will match the two and a trade will occur which will be reported to the markets as well as to each client's portfolio trading algorithm. If 55 orders are not executed within the system, control passes to block 46 where controller CPU 10 decides, based on recent trading history, where and how much of each order to place on which external automated market, broker, exchange and/or its own network. Orders placed other than on its own network are submitted on a price/probability of execution basis. Further, if an order has been published to a market, broker or market access network, internally executed transactions between clients are done on a subject to cancellation 65 basis. As long as an order remains unexecuted, it is subject to cancellation or alteration by the system in step 38 or by the client's process or manually in step 42.

Col. 11, lines 38-68.

If a trade is executed internally in step 44 or externally
Administrator control is transferred to block 50 which
procedures. All internal trades executed
by the present invention are immediately reported in the appropriate manner to the central reporting facility via trade data link or terminal 26 so as to disclose them to the markets and are written to files in the storage devices 14 of each client for processing at the end of each day. They can be viewed selectively based upon various levels of secure access during the trading day. At the end of the day, all purchase and sale transactions for each portfolio in each security are average-priced at the client's instruction so that there is only one sale report and one buy report per security per client. These reports are then forwarded to the clearing agent and, if appropriate, to each client's custodian. Internal reports for record-keeping and research purposes are also made. Further detail concerning settlement procedures is provided in connection with the discussion of FIG. 9 below.

Col. 12, lines 6-25.

: 30 Trade reports from remote systems would be
: matched to outstanding tentative executions just as the
: original orders were matched. Partial order matches or
: partial executions cause the contra side order to split
: into an order of the correct size and an order holding
: 35 the remaining size. Rejection of a match triggers appropriate fusion of previously split orders.

: As noted above, an internal auto-trader may issue an
: order as good or better than an external quote which is
: in tentative match. The internal quote is matched as
: 40 soon as the external match is rejected. The match system can recognize that a better match is possible and
: attempt to cancel the external order before it is accepted.
: In addition, the match process is able to "chain"
: 45 matches so that all of the matches are done or none are
: done. This would, for instance, allow an order for a
: security denominated in currency "a" to be executed in
: a market trading in currency "b" if the "b" to "a" ex-
: change rate were acceptable. Further, the system could
: 50 be modified to include an intelligent order manager
: which executes profitable trades that the base system
: would not itself execute. For instance, an all-or-nothing
: order for 16,000 shares of IBM would fail if the system
: had only 15,000 shares available. The intelligent order
: 55 manager would, upon the client's standing or contempla-
: poraneous instruction, execute the full order and find
: the other 1000 shares later if the overall trade looked
: profitable or if customer satisfaction required execution.

: Reference is now made to FIG. 9 which illustrates in
: schematic flowchart form the trade settlement proce-
: 60 dures used by the present invention to handle order
: matches at the end of each trading day. This flow chart
: examines in greater detail the activity undertaken by the
: system which was referred to above in step 50 of FIG.
: 7. After an order has been matched and accepted by
: 65 both sides, controller CPU 10 validates all data con-
: cerning the trade in step 100. Proper identification for
: each security, broker, customer account, exchange
: code, transaction date, settlement date, price and all

Col. 14, lines 30-68.

other aspects of the trade are checked to ensure accuracy. Validation procedures are flexible enough to allow exception overrides, as well as easy additions and deletions to each data item's possible value list. Validation can best be accomplished using a relational database language. If validation fails in step 102, control is transferred to step 104 where corrections may be made either by human intervention or, preferably, in an automated fashion through the use of databases. After either successful validation or correction of errors, control 10 passes to step 106 in which the trades are sorted and aggregated by security. Each trade is then tested in step 108 to see if it is eligible for price averaging. Various factors could preclude any particular trade from eligibility. For example, average pricing would rarely be 15 done between clients who both participated on the same side of a trade. An important aspect of this invention occurs in step 110 where, at the client's instruction, eligible purchases (sales) in the same security are consolidated and priced on an average basis for each client. 20 This procedure results in one buy and/or one sell order being generated for any particular customer at an average price regardless of the actual number of trades executed to accumulate or sell the shares of that particular security during that day. The advantageous impact of 25 this aspect of the invention becomes apparent when it is understood that the invention is specifically designed to generate large numbers of trades for a given client, possibly in the same security, on any given day. When

Col. 15, lines 1-29

As evident from the citations, Lupien et al. never discloses anything regarding fractional shares, odd lots or single shares, but in fact discloses all trading in round lots of 100 shares. Accordingly, the Applicant respectfully submits that Lupien et al. and the Examiner's Official Notice does not anticipate nor render obvious claim 1. Reconsideration and withdrawal of the rejection of claim 1 is respectfully requested.

II. The Lupien et al. Patent Does Not Render Obvious the Claims of the Present Invention

Claims 2-3 stand rejected as unpatentable under 35 U.S.C. §103(a). In support of the rejection, a combination of Lupien et al. (5,101,353) and Certain Official Notice was cited. This rejection is respectfully traversed.

As mentioned above, Lupien et al. fails to disclose aggregation of any odd lots, single shares or fractional shares, which is recited in claims 2-3. Additionally, Lupien et al. teaches away from such aggregation because Lupien et al. requires round lots of 100 shares. Therefore, Lupien et al. fails to disclose or render obvious aggregation of odd lots, single shares or fractional shares and claims 2-3.

Moreover, the Examiner's Certain Official Notice does not disclose this recitation. Accordingly, the Applicant respectfully submits that the combination of Lupien et al. and the Certain Official Notice does not render claims 2 and 3 obvious. Reconsideration and withdrawal of the rejection of claims 2-3 is respectfully requested.

III. Terminal Disclaimer to be Filed to Obviate Obviousness-Type Double Patenting

Claims 1-3 stand rejected based on the non-statutory obviousness-type double patenting based on claims 1-86 and claims 1-37 of the Applicant's prior issued patents – U.S. Patent Nos. 6,601,044 and 6,996,539, respectively. Upon indication of otherwise allowable claims, the Applicant will file a terminal disclaimer to obviate these obviousness-type double patenting rejections.

CONCLUSION

It is respectfully submitted that, in view of the foregoing amendments and remarks, the application as amended is in clear condition for allowance. Reconsideration, withdrawal of all grounds of objection and rejection, and issuance of a Notice of Allowance are earnestly solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. §1.16 or §1.17 to Deposit Account No. 11-0600. The Examiner is invited to contact the undersigned to discuss any matter regarding this application.

Respectfully submitted,
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